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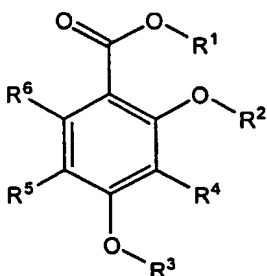
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- (74) Agent: **ZUMSTEIN & KLINGSEISEN**; Bräuhausstrasse 4, 80331 Munich (DE).
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- (71) Applicant (for all designated States except US): **J. URIACH & CIA. S.A.** [ES/ES]; Av.Camí Reial, 51-57, E-08184 Palau-Solita i Plegamans (ES).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **BARTROLÍ ORPÍ, Javier** [ES/ES]; C/Enric Giménez, 16, E-08034 Barcelona (ES). **ALMANSA ROSALES, Carmen** [ES/ES]; C/Teodora Lamadrid, 41, E-08022 Barcelona (ES). **FERNÁNDEZ DE ARIIBA, Alberto** [ES/ES]; C/Secretari Coloma, 12, E-08025 Barcelona (ES).
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- Published:**
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- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: 2,4-DIHYDROXYBENZOIC ACID DERIVATIVES



(I)

(57) Abstract: The present invention relates to novel compounds of formula (I) and to the salts, solvates and prodrugs thereof, wherein the meanings of the various substituents are as disclosed in the description. Said compounds are useful for the treatment or prevention of psoriasis and other immune diseases.

WO 2004/009528 A1

INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 03/07777

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C07C69/92 C07C65/21 C07C69/63 A61K31/60 A61K31/235
A61P17/06

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C07C A61K A61P

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

BEILSTEIN Data, EPO-Internal, PAJ, WPI Data, CHEM ABS Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>I. R. HARDCASTLE ET AL.: "Polymer-assisted solution-phase library synthesis of 4-alkoxy-2-hydroxy-3,5,6-trifluorobenzoic acids" TETRAHEDRON LETTERS., vol. 42, no. 7, 2001, pages 1363-1365, XP004316654 ELSEVIER SCIENCE PUBLISHERS, AMSTERDAM., NL ISSN: 0040-4039 cited in the application page 1364, right-hand column -page 1365, left-hand column; table 1 page 1365, reference '15! --- -/--</p>	14,15,17

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- * & * document member of the same patent family

Date of the actual completion of the international search

30 October 2003

Date of mailing of the international search report

20/11/2003

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax (+31-70) 340-3016

Authorized officer

Kardinal, S

INTERNATIONAL SEARCH REPORT

Application No
PCT/EP 03/07777

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 374 772 A (CARSON MATHEW ET AL) 20 December 1994 (1994-12-20) column 1, line 5 - line 40 column 2, line 35 - line 50 column 26; examples 51-54 ---	1,12-14, 17,19,21
A	US 4 871 769 A (DIAMANTINI GIUSEPPE ET AL) 3 October 1989 (1989-10-03) the whole document ---	21
A	US 3 766 247 A (MENDEL A) 16 October 1973 (1973-10-16) column 1, line 20 - line 26 examples 6,26; tables I,III ---	1
A	US 4 960 884 A (ROUSH DAVID M ET AL) 2 October 1990 (1990-10-02) column 1, line 8 - line 16 column 12; example 130 ---	1
A	J. MU ET AL.: "Synthesis and monolayer formation of liquid crystal polysiloxanes having a lateral side chain with a perfluoroalkyl chain" COLLOIDS AND SURFACES. A, PHYSICACHEMICAL AND ENGINEERING ASPECTS, vol. 181, 2001, pages 303-313, XP002239149 ELSEVIER, AMSTERDAM., NL ISSN: 0927-7757 cited in the application page 305; figure 1 ---	1,22
A	R. ARNOLD-STANTON, D. M. LEMAL: "Tandem Nucleophilic Additions of Aryloxides" JOURNAL OF ORGANIC CHEMISTRY., vol. 56, - 1991 pages 151-157, XP002239150 AMERICAN CHEMICAL SOCIETY. EASTON., US ISSN: 0022-3263 cited in the application page 153, left-hand column ---	1
A	I. R. HARDCASTLE ET AL.: "Inhibition of Protein Prenylation by Metabolites of Limonene" BIOCHEMICAL PHARMACOLOGY, vol. 57, 1999, pages 801-809, XP002259805 PERGAMON, OXFORD, GB ISSN: 0006-2952 page 805, left-hand column ---	14,17
	-/--	

INTERNATIONAL SEARCH REPORT

Application No
PCT/EP 03/07777

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	MARYADELE J. O'NEIL (ET AL.) (EDS.): "THE MERCK INDEX" 2001 , MERCK & CO., INC , NEW YORK XP002259806 page 3285 -page 3286 3285. Dimethyl Sulfoxide -----	14,17

INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP 03/07777

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☒ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

The scope of claims 1-21, in as far as the expression 'prodrug' is concerned, is so unclear (Article 6 PCT) that a meaningful search is impossible with regard to this expression. Nevertheless the search was complete the compounds described in claims 1-21 and the salts and solvates thereof.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP 03/07777

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US 4960884	A	02-10-1990	NONE	